WHAT IS CLAIMED IS:

1. A method, comprising:

obtaining a signal indicative of a detection by an electromagnetic detector;

comparing said signal to at least one criterion, said at least one criterion representing a characteristic of a signal, said characteristic indicative of whether the signal resulted from detection of a desired electromagnetic wave as being rejected and indicating a signal when said comparing indicates that the signal did not result from detection of the desired electromagnetic wave.

2. A method as in claim 1, wherein said comparing comprises determining a multiplicity of events within the signal, and rejecting the signal if the number of events is outside a specified threshold.

3. A method as in claim 1, wherein said signal is indicative of a gamma ray detection by a gamma ray detector.

4. A method as in claim 3, wherein said criterion includes a threshold based on expected amounts of gamma ray detection during a specified procedure.

5. A method as in claim 4, wherein said comparing comprises using a raw multiplicity filter, to reject signals when they do not have more than a specified number of events within a specified time.

6. A method as in claim 4, wherein said comparing comprises using a global density filter to reject signals when they do not have more than a specified number of events in a specified time period.

7. A method as in claim 4, wherein said comparing comprises using a local density filter to reject strings in a signal that have more than a specified number of events in a specified time.

8. A method as in claim 4, wherein said comparing comprises using a raw multiplicity filter to reject signals when they have a size greater than a specified amount.

9. A method as in claim 4, wherein said comparing comprises using an average energy filter that rejects signals based on a comparison to a specified average energy threshold.

10. A method as in claim 3, wherein said comparing comprises comparing the signal to a criterion that represents vibrational energy.

11. A method as in claim 3, wherein said comparing comprises comparing the signal to a criterion that represents a cosmic ray.

12. A method as in claim 3, wherein said comparison comprises comparing the signal to a plurality of criterion that represent both vibrational energy and a cosmic ray.

13. A method as in claim 2, wherein said obtaining a signal comprises storing the signal in a buffer along with an associated signal that represents whether the signal is complete.

14. A method as in claim 1, further comprising forming an image and excluding rejected signals from said image.

15. A method as in claim 1, further comprising initially associating a second signal representing a valid signal with the signal, and using said comparing to change said second signal to a value representing an invalid signal when said comparing indicates that the signal did not result from detection of the desired electromagnetic wave.

16. A method as in claim 15, wherein said second signal is a digital bit.

17. A method, comprising:

obtaining a first signal from an electromagnetic detector, indicative of a detection by the electromagnetic detector;

associating a second signal with the first signal, the second signal having a first value which indicates that the first signal is valid;

processing the value of the first signal, to determine whether the first signal represents a desired event being monitored; and

changing the second signal to a second value when said processing indicates that the electromagnetic detector signal represents an event other than a desired observed event.

18. A method as in claim 17, wherein said electromagnetic detector signal is a signal from a gamma ray detector, and said desired observed event is a clinical gamma ray imaging application.

19. A method as in claim 17, wherein said processing represents filtering the signal to remove events within the signal representing noise.

20. A method as in claim 18, further comprising forming a medical image using only first signals which have associated second signals in said first state.

21. A method as in claim 19, wherein said filtering comprises determining if a number of events occurring within the first signal is outside of a specified threshold.

22. A method as in claim 19, wherein said filtering comprises determining if an amount of detection is outside a specified threshold.

23. A method as in claim 19, wherein said filtering comprises determining if a density of events within said first signal is outside a specified threshold.

24. A method as in claim 18, wherein said processing comprises comparing the signal to a criterion that represents vibrational energy, and changing the value of the second signal to represent an invalid signal when said comparing indicates that the signal represents vibrational energy.

25. A method as in claim 18, wherein said processing comprises comparing the signal to a criterion that represents a cosmic ray, and changing the value of the second signal to represent an invalid associated first signal, when said comparing detects that the signal represents a cosmic ray.

26. A system comprising:

an electromagnetic detector, having a surface adapted to detect an electromagnetic wave, and producing an output signal indicative of a detection; and

a signal processor, including an electronic filter therein, which processes said output signal, using a filter characteristic that indicates whether the output signal resulted from detection of a desired electromagnetic phenomenon, and indicating signals as being rejected when they did not result from said detection of said desired electromagnetic phenomenon.

27. A system as in claim 26, wherein said electromagnetic detector is a medical gamma ray detector.

28. A system as in claim 27, further comprising an image display which displays an image based on said output signal, including only signals that resulted from detection of the desired electromagnetic phenomenon.

29. A system as in claim 26, wherein said filter characteristic represents a multiplicity of events within the signal.

30. A system as in claim 26, wherein said filter characteristic represents a density of events within the signal.

31. A system as in claim 27, wherein said filter characteristic represents a characteristic of incoming cosmic rays.

32. A system as in claim 27, wherein said filter characteristic represents a characteristic of electromagnetic interference.

33. A system as in claim 27, wherein said filter characteristic represents a characteristic of mechanical vibration.

34. A system as in claim 26, wherein said signal processor includes a buffer therein which stores an electronic representation of said output signal, and stores a status signal indicative of whether the output signal is rejected.

35. A signal processor, comprising:

an input portion, receiving a signal from a medical gamma ray detector;

a signal processor portion, including an electronic filter therein which processes said signal from said medical camera ray detector to reject portions of the signal that did not result from detection of a desired electromagnetic phenomenon, and produces an image output signal, representing an image based on at least one signal from said image portion which is not rejected by said signal processor portion.

36. A signal processor as in claim 35, wherein said electronic filter rejects signals based on a number of events within the signal.

37. A signal processor as in claim 35, wherein said electronic filter rejects signals based on a density of events within the signal.

38. A signal processor as in claim 35, wherein said electronic filter filters out signals which have a characteristic representing incoming cosmic rays.

39. A signal processor as in claim 35, wherein said electronic filter filters out signals which have a characteristic representing electromagnetic interference.

40. A signal processor as in claim 35, wherein said electronic filter filters out signals which have a characteristic representing mechanical vibration.

41. A method, comprising:

determining, in a medical gamma ray system, a dose and number of gamma ray signals which will be applied to a patient;

receiving gamma rays from the patient as applied by the medical camera ray system;

using said dose and number of gamma ray signals to form a filter to filter out portions of the received to gamma rays that are outside a range that is based on said dose and number of gamma ray signals determined in said determining.